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# SOCIAL NETWORK ANALYSIS REPORT “AMBER HEARD”

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OVER 2021 IN TWITTER



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# Analysis Report

## About the Data

The data is about tweets made in 2021 in Twitter social public account of “Amber Heard”. It contains 228687 tweets explained by 14 features.

## After wrangling the data we have some estimations:

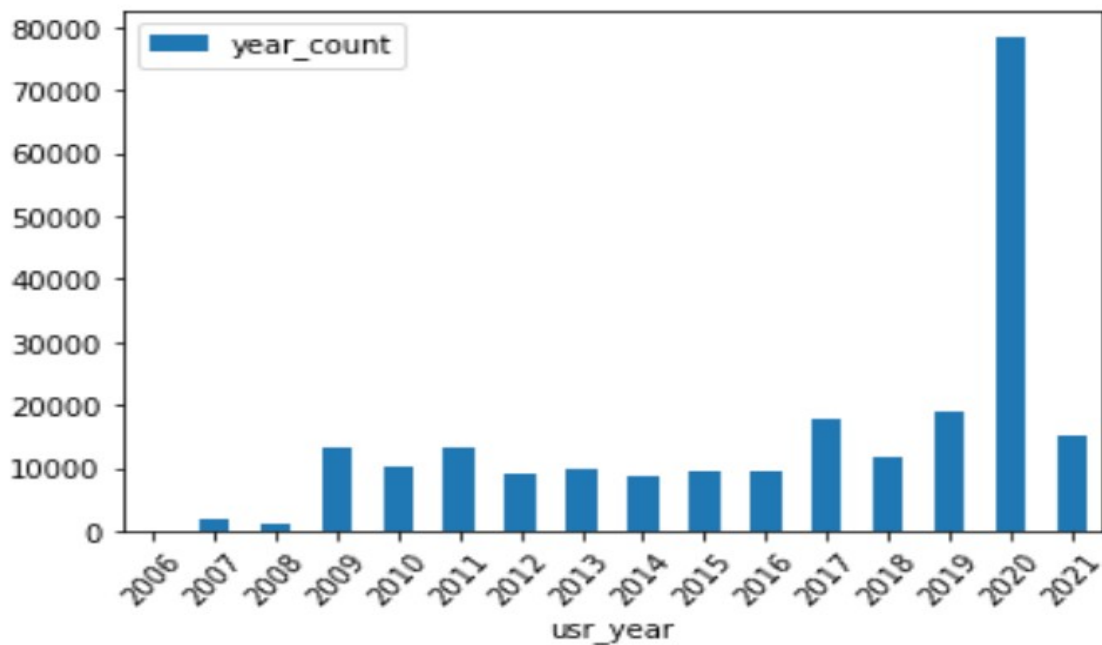
1. No. of all users in the data is 48982 made 228687 tweet in 2021.:

- 3660 users fresh created in 2021 (7.5% from the whole users) made 15007 (6.6% from all tweets).
- (6.790% from users\_created\_2021) tweeted in the same day they created their account.
- (27.91%) of users\_created\_2021 tweeted within 14 days of account creation.
- 78525 users fresh created in 2020 made 78525 (34.3% from all tweets).
- The users created in many years from 2006 to 2018 + 2021 made 150148 tweets.
- no. of tweets from users created in 2018 are... 11741
- no. of tweets from users created in 2019 are... 19022

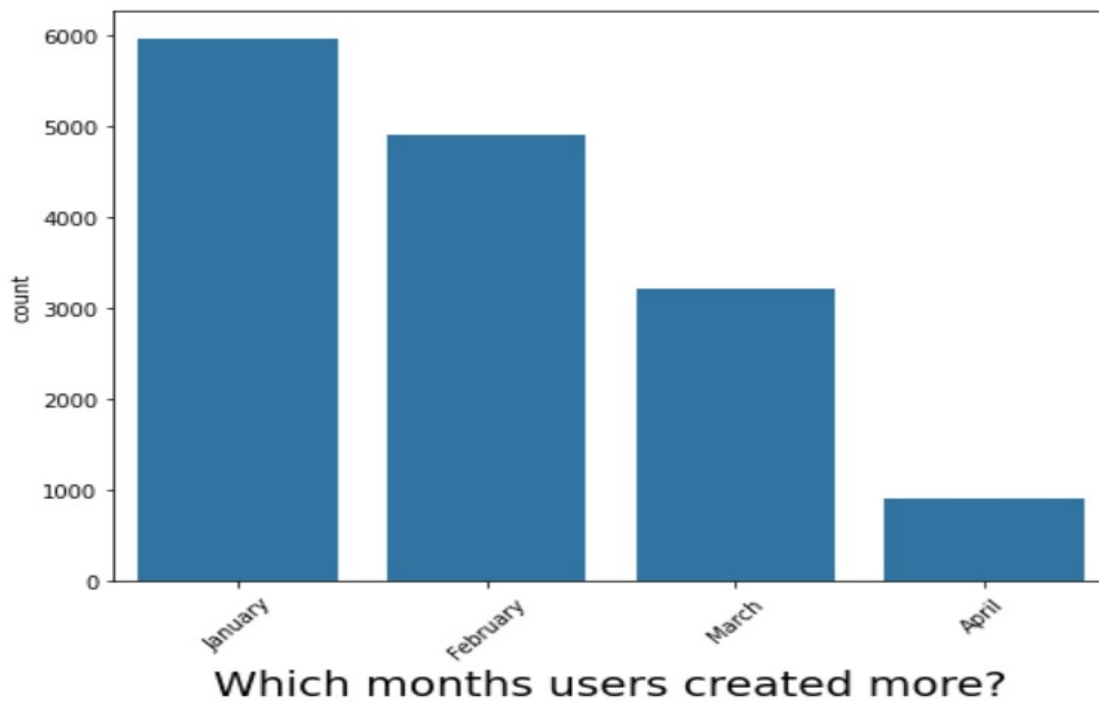
	id_str	created_at	full_text	user.id_str	user.screen_name	user.name	user.created_at	
0	1345359931550134272	2021-01-02 13:22:57+00:00	So ready 🌟 for the next #DeppMovieNightInFil...	1.319008e+18	Noneofthemknew1	Tongo Bozzie 🇳🇬	2020-10-21 20:08:07+00:00	I wa
1	1345359929507459075	2021-01-02 13:22:57+00:00	#Johnuary #DeppMovieNight #JusticeForJohnnyDep...	6.323772e+06	Angiex0101	Nor33 🇫🇷	2007-05-25 18:55:38+00:00	I
2	1345359711101624321	2021-01-02 13:22:05+00:00	That's today 🌟 #DeppMovieNight #Johnuary #Justic...	9.126742e+17	viverachel	Vive Harris	2017-09-26 13:44:20+00:00	
3	1345359532659265536	2021-01-02 13:21:22+00:00	Amber Heard is an abuser a liar and a fraud, s...	1.325068e+18	sharron67204447	pirate 🇳🇬	2020-11-07 13:30:15+00:00	Jc
4	1345358697959047168	2021-01-02 13:18:03+00:00	@_missyc97_ 2021 to Amber Heard. 👉 https://t.co...	1.243815e+18	f_liono	Liono	2020-03-28 08:20:34+00:00	I'm i
...	...	...	...	...	...	...	...	...
228682	1379903143274803204	2021-04-07 21:05:21+00:00	How quickly I changed my tune when I realized ...	1.482895e+07	Astartiel	JENNIE ASTARTIEL ISHTAR ASET INANNA MORNINGSTAR 🇵🇸	2008-05-19 05:18:58+00:00	RE
228683	1379903078216908805	2021-04-07 21:05:05+00:00	@Eve_Barlow I would like to know who your butl...	1.216082e+18	johndomand	j.c.d.lli	2020-01-11 19:40:49+00:00	
228684	1379903047518806025	2021-04-07 21:04:58+00:00	@omgstater @s_sanja_s @Eve_Barlow "I don't nee...	1.286399e+18	twistandshout77	Em 🌙 🌟 ✨ ... 🇳🇬	2020-07-23 20:35:23+00:00	trut
228685	1379902446814646272	2021-04-07 21:02:35+00:00	@JaneSpa79755410 @MirrorCeleb @Ofcom How dare ...	1.227922e+18	milko976	💜 Mellie 🇵🇸	2020-02-13 11:46:13+00:00	
228686	1379902337385398273	2021-04-07 21:02:09+00:00	#scummedia\n#JusticeForJohnnyDepp	1.313513e+18	VictoriaBreakw1	Victoria Breakwell Wald- Mignon 🇳🇬	2020-10-06 16:15:57+00:00	#jus

228687 rows × 14 columns

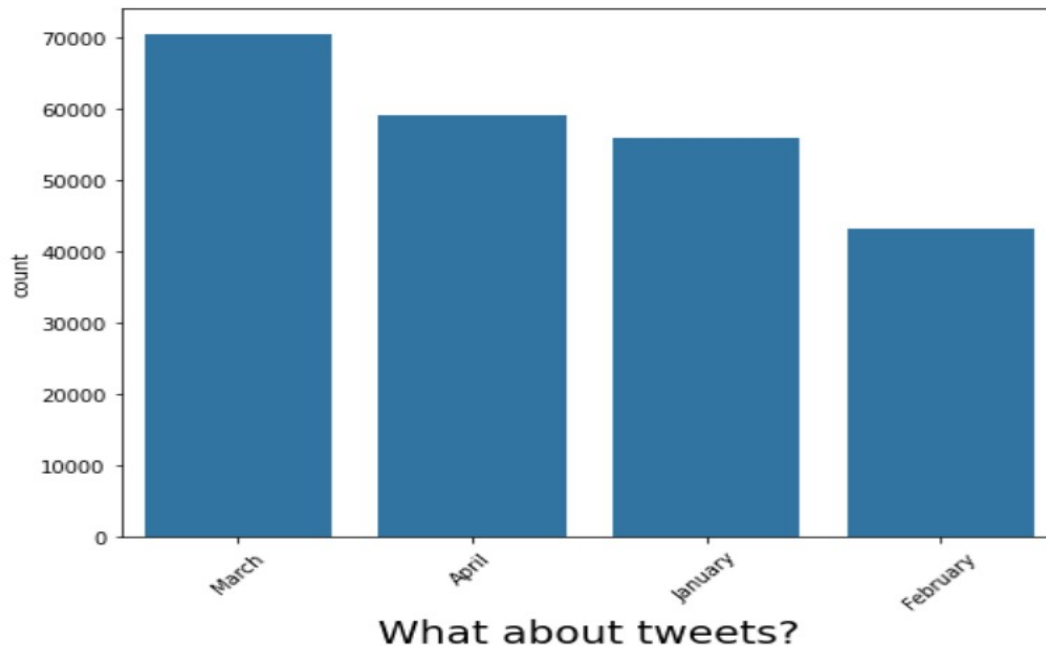
2. Here can explain more how the no. Of users created in 2020 in interesting in that data.



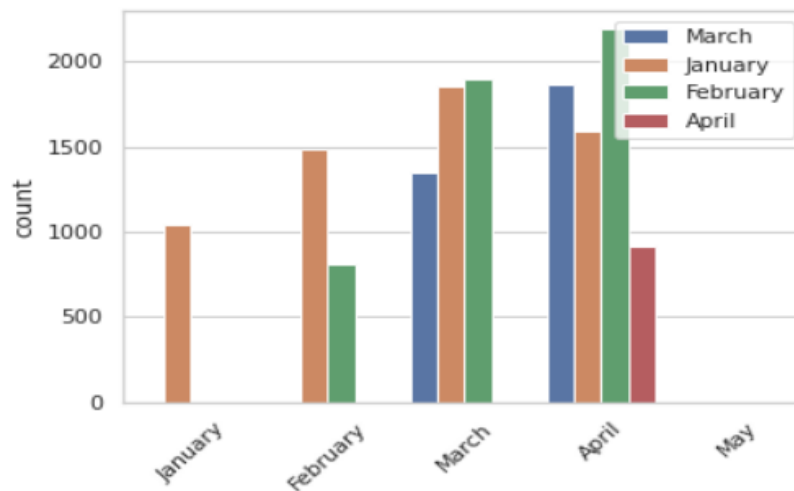
3. Many users created in certain months (mostly in Jan. ,Feb. Mar.) in 2020 with interesting way.



5. By checking the tweets, found interesting insight top months of tweets were ( Mar., Apr., Jan.) so we have matching here with users creation

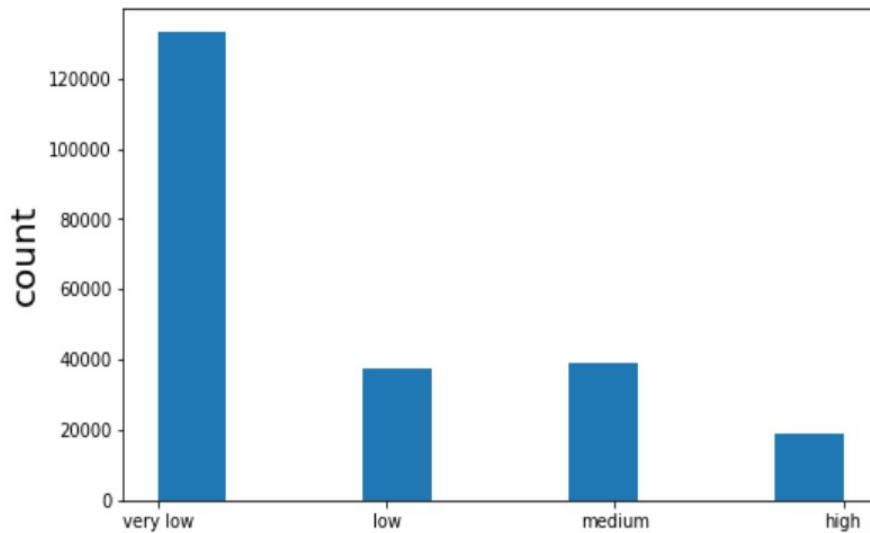


When mixing them up together we get more prospective view to see the no. Of tweets for users created in the same year of tweet:



Relation between tweets and usrs according to months

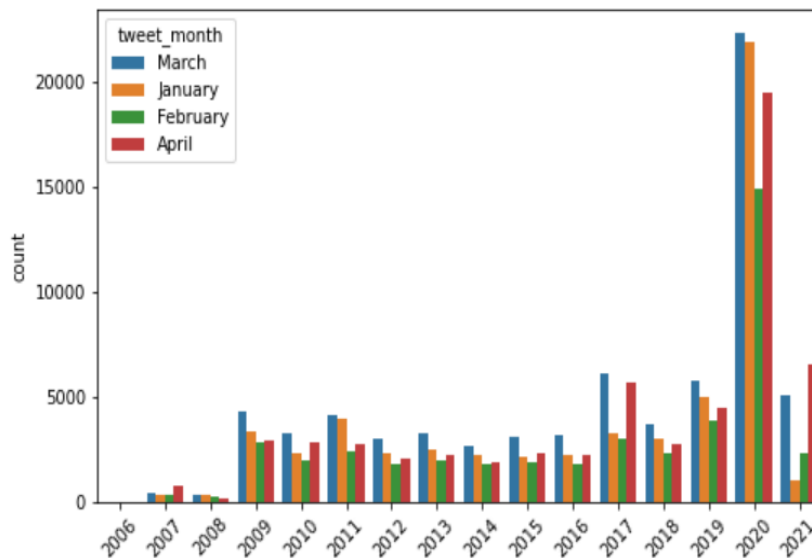
6. A very suspicious insight upcoming now, when making distribution for the data according to the time difference between creation of user and his tweet found that within users created in 2021 most of them created in the same days and others in few days.



What is the abnormality in days diff. between tweets and users created?

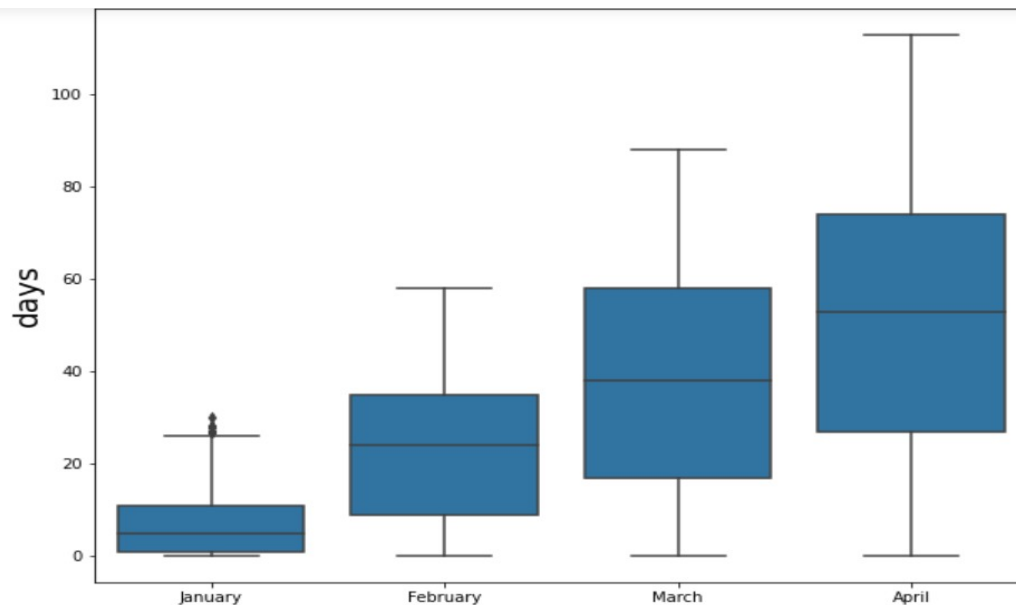
\*\* This want to be mixed to see the relation between tweet\_month and users years in these months to figure out the most tweeting users.

We can see the relation that users of 2020 created more than other years, where all tweets in mar. More except 2021 tweeted in April more.



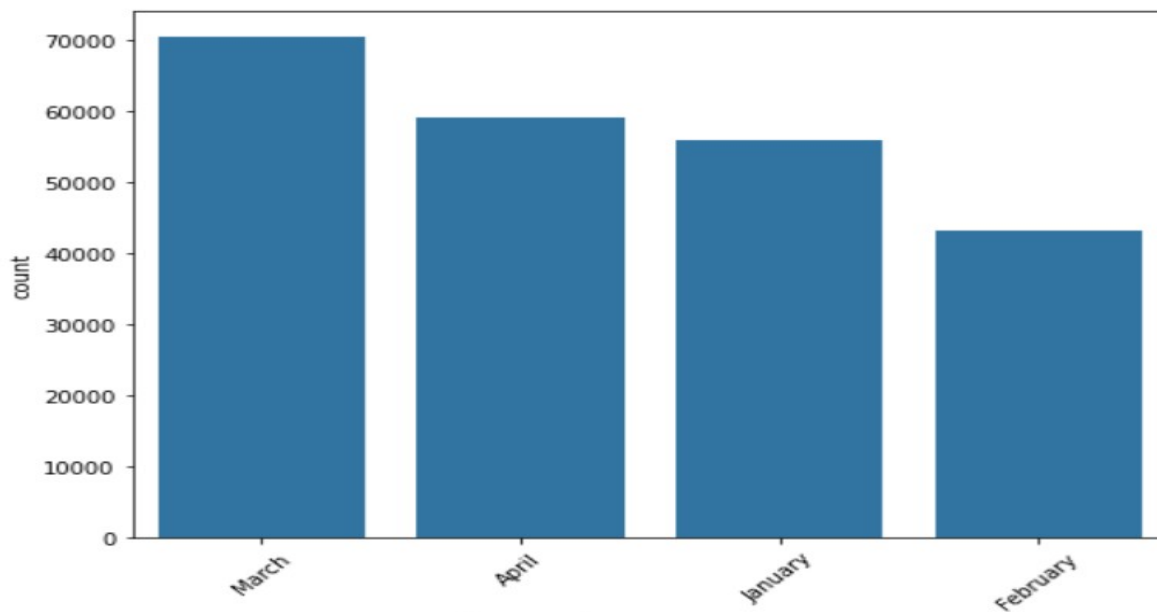
Relation between tweets months and users according to years of creation

7. Also relating to the months of tweets in Apr., and Mar. have tweeted more within almost two months, but Jan. and Feb. is the shortest most tweets within days.



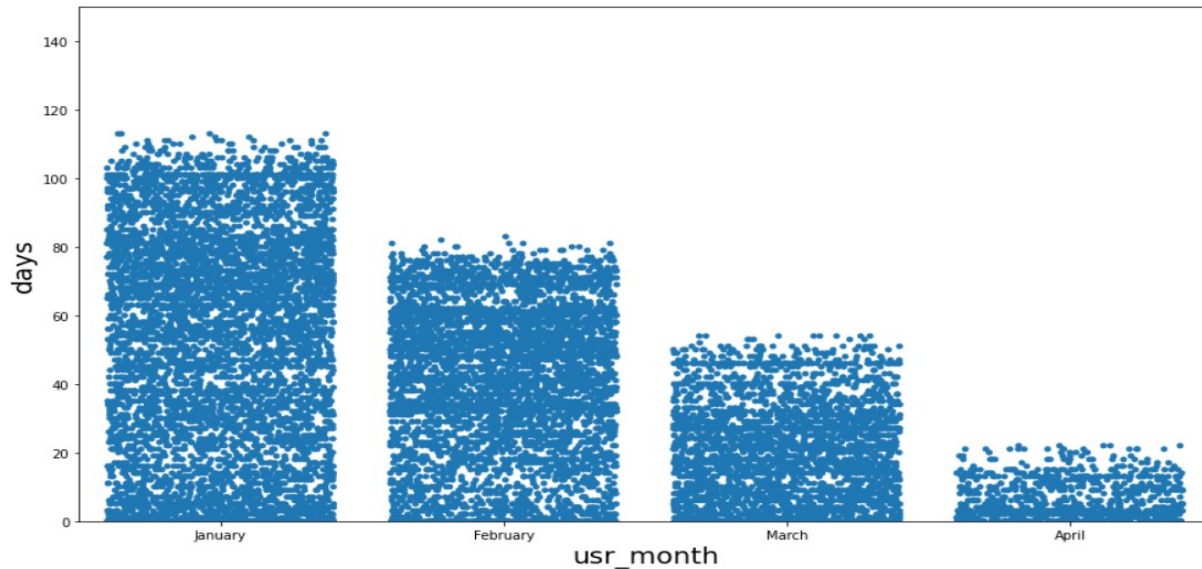
What is the ubnormality in days diff. between usrs created in short time?

8. According to user month of creation .. Here is matching with the previous insight.

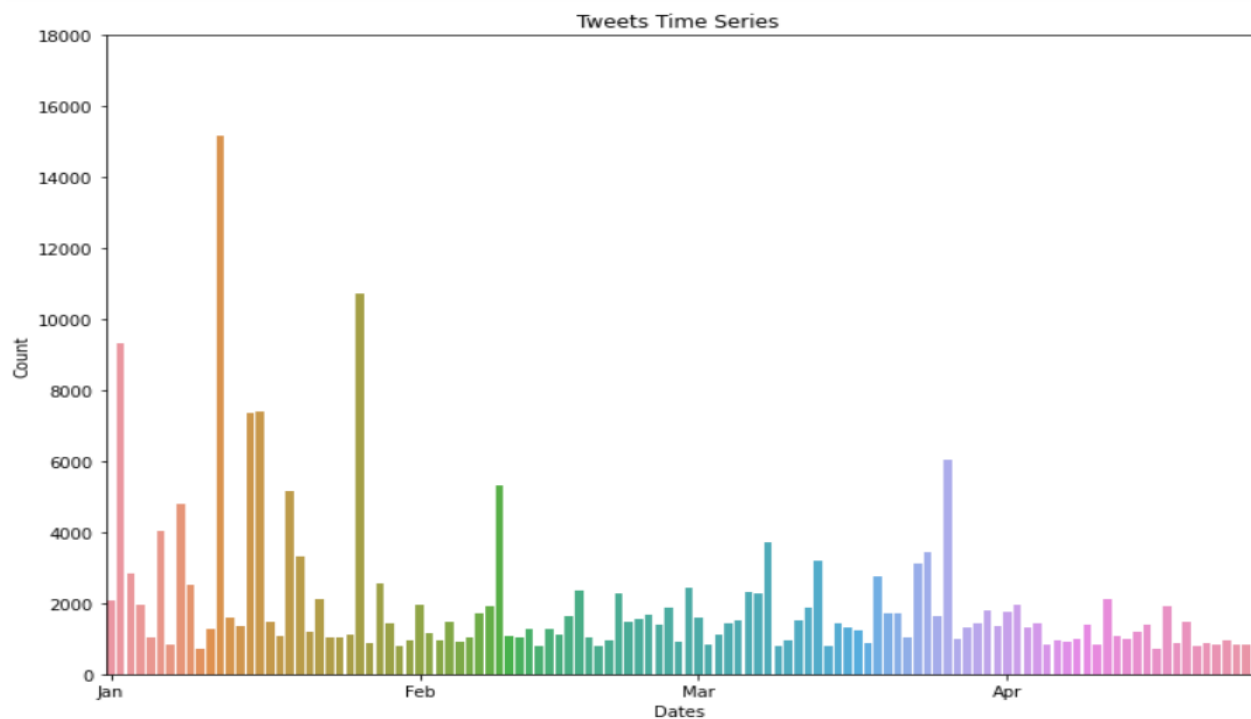


What about tweets?

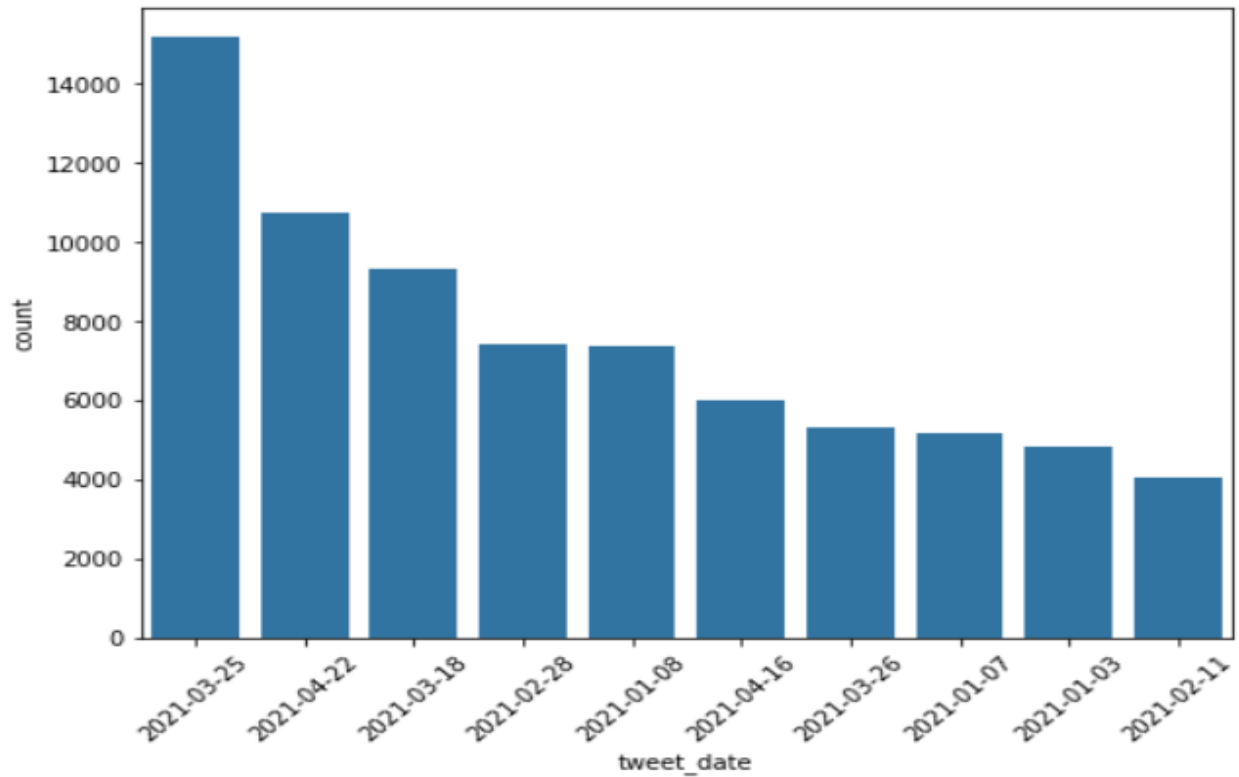
9. Also the users created in 2020 had periods of activities that means many of them were getting active for a reason, According to Usrs created in jan have the most tweets but have croudy regions as it appears .. first regions after they created then decreased their activity, then increased again between 150 - 200 days of creation ..etc, the same for the rest of months.



If we checked for the distribution of all dates and see how butky is the tweets in each month according to dates we have alot of trendy dates in jan and march.



11. That made me look for further investigation gave a prospective point of view to the whole insights in each corner of the data, so I explored the tweet\_dates that have the highest no. Of tweets, to see the most trendy dates, found that:

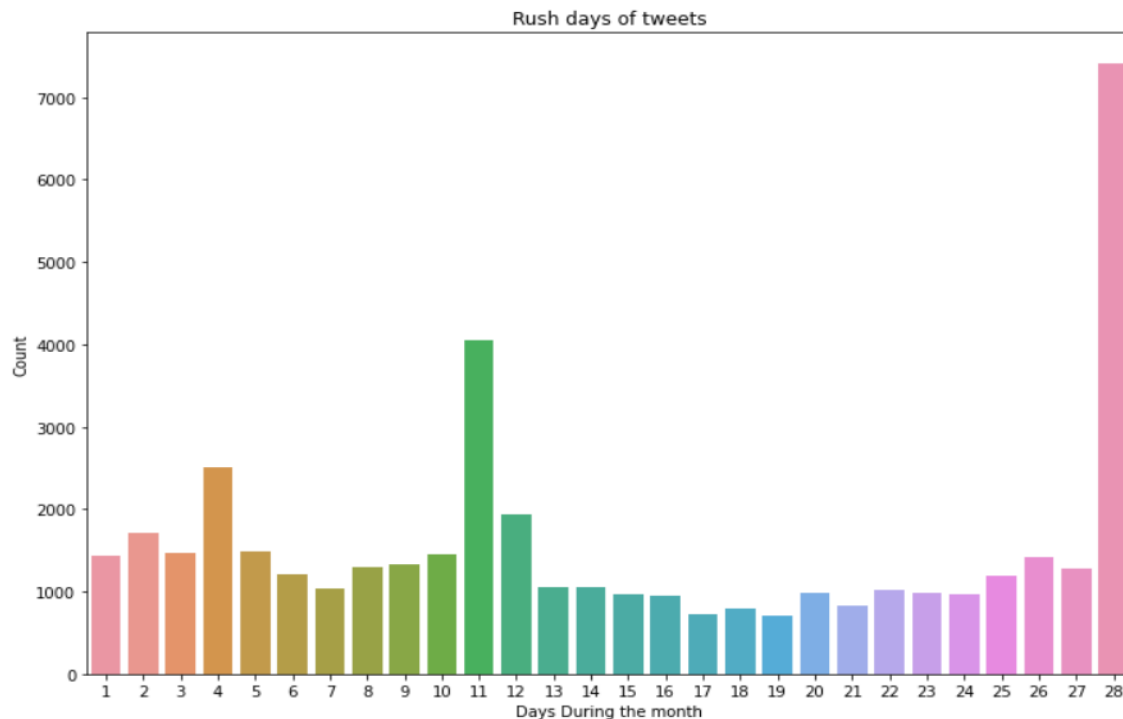




11\*. That made me explore each month to see the most frequent users tweeted on those dates. By investigating the February, found that tweets from fresh users are the more bulky in the month specially in trendy dates in February.

## February

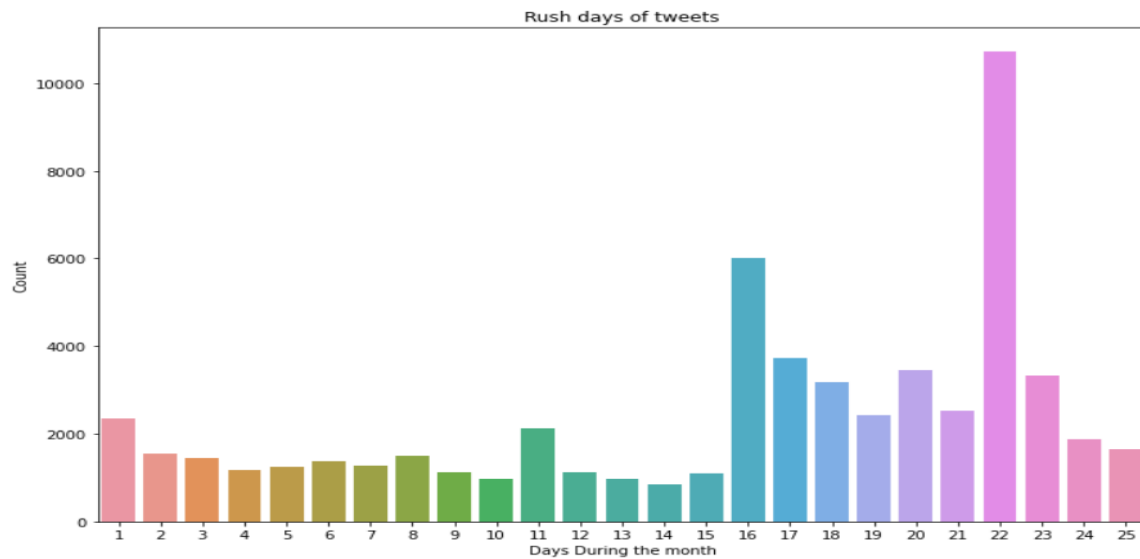
Found that Many tweets are from same user in the same day and also all are fresh users .. by checking the shape pf whole tweets in feb/2021 (43246 tweets) .. from (2299 users) tweeted in the same year of creation. no. of tweet from fresh users in same day: 240. Total no. of tweet from 2021 users: 855



In Feb. peaks are (4,11,12,28).

## April

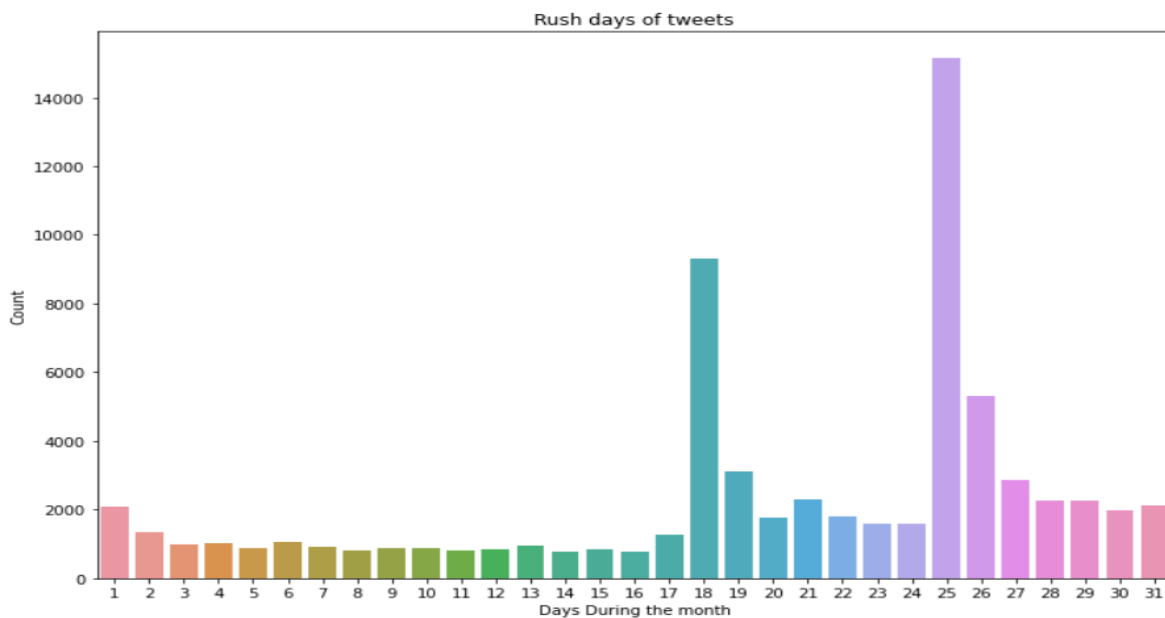
12. For April, found that (59104 tweets) .. only (12158 users), no. of tweet from fresh users in same day: 192, Total no. of tweet from 2021 users: 6570, no. of frequent fresh users (2021) : 1351 no. of all frequent users: 12158.



In Apr. peaks are (1,11,16:23).

## March

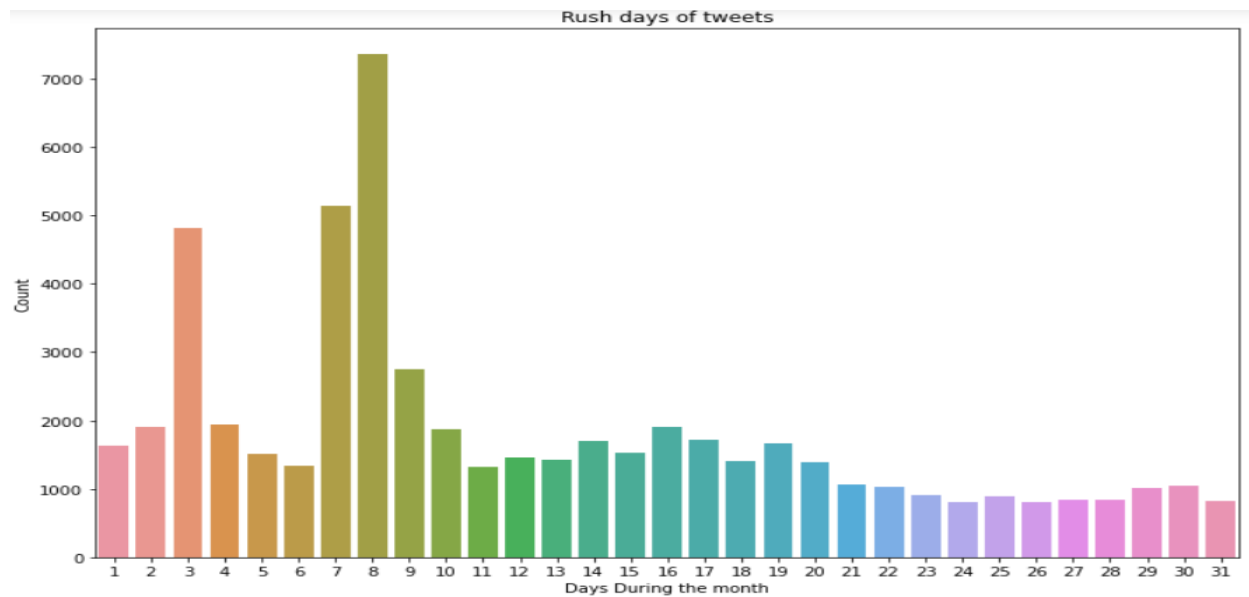
13. The same for March (70478 tweets) .. only (22009 users), no. of tweet from fresh users in same day: 316. Total no. of tweet from 2021 users: 5101, no. of frequent fresh users (2021) : 1779. no. of all frequent users: 22009.



In Mar. Peaks are (1, 18, 19, 25, 26, 27)

## January

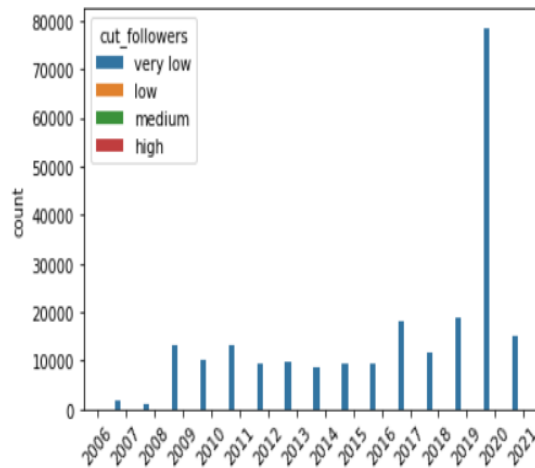
19. January to had (55845 tweets) .. (12356 users) .no. of tweet from fresh users in same day: 265, Total no. of tweet from 2021 users: 1037 ,no. of frequent fresh users (2021) : 310 ,no. of all frequent users: 17055



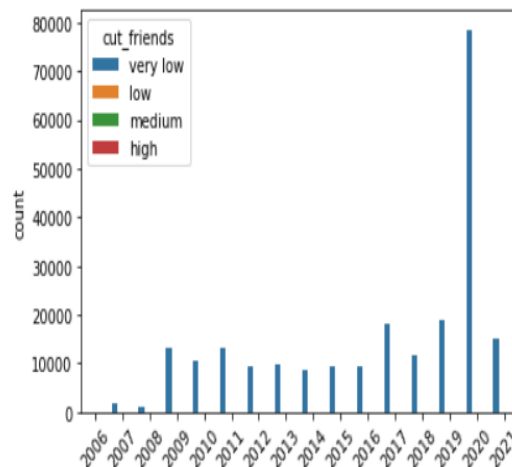
In Jan. Peaks are (3, 7, 8, 9)

## Another interesting insights:

The most users tweeted are those created in 2020 and interesting but the strange thing is that they have the least followers and friends count.



Relation between users created in various years and their count according to their followers



Relation between users created in various years and their count according to their friends

## Conclusion:

Many users were created in the very beginning of the year .. Many of them tweeted in the same day, others tweeted in minutes that is a very suspicious anomaly.

The percentage of tweets made by 2020\_created users alone are interesting, and the style of their tweeting is even more interesting as they have few dates and months have the bulky regions of their tweets, and despite this They have the least followers and friends count, that means they get to tweet only for a reason.

Also regarding the trendy dates in each month, for sure there is something in common and a special event that is going with "Amber" leads them to be more active in those dates.

2018, 2019 and 2017 users had also a role in high tweeting rates than 2021 users who began to increase their activity in March and April.

**Many factors give a clue that even those accounts are bots or being created just for attacking "Amber".**